DEPARTMENT OF TRANSPORTATION

Coast Guard

33 CFR Parts 126 and 127

[CGD 88–049]

RIN 2115–AD06

Waterfront Facilities Handling Liquefied Hazardous Gas

AGENCY: Coast Guard, DOT.

ACTION: Final rule.

SUMMARY: The Coast Guard is amending its regulations for waterfront facilities capable of transferring liquefied hazardous gas, or ''LHG'', in bulk, to or from vessels. The transfer of LHG prevents hazards similar to those from the transfer of liquefied natural gas, or ''LNG'', yet facilities capable of transferring LNG in bulk are subject to much more stringent requirements. The amended regulations will strengthen the requirements for the transfer of LHG and move those requirements from part 126 to part 127.

DATES: This rule is effective on January 30, 1996. The Director of the Federal Register approves as of January 30, 1996 the incorporation by reference of certain publications listed in this rule.

ADDRESSES: Unless otherwise indicated, documents referred to in this preamble are available for inspection or copying at the office of the Executive Secretary, Marine Safety Council (G–LRA, 3406) [CGD 88–049], U.S. Coast Guard Headquarters, 2100 Second Street SW., Room 3406, Washington, DC 20593–0001 between 8 a.m. and 3 p.m., Monday through Friday, except Federal holidays. The telephone number is (202) 267–1477.

FOR FURTHER INFORMATION CONTACT: Mr. Gary W. Chappell, Port Safety and Security Division (G–MPS–3), by telephone (202) 267–0491 or fax (202) 267–0506.

SUPPLEMENTARY INFORMATION:

Drafting Information

The principal persons involved in drafting this document are Mr. Gary W. Chappell, Project Manager, and Mr. Patrick J. Murray, Project Counsel, Office of Chief Counsel.

Regulatory History

On October 5, 1993, the Coast Guard published a notice of proposed rulemaking entitled ''Waterfront Facilities Handling Liquefied Hazardous Gas'' in the **Federal Register** (58 FR 51906). The Coast Guard received 26 Letters commenting on the proposal. No public meeting was requested, and none was held.

Background and Purpose

The Coast Guard has determined that it needs to regulate transfers of LHG, in bulk, to and from vessels at waterfront facilities. Data collected over the last 10 years on deaths, injuries, and property damage resulting from accidents during these transfers indicate that restrictions on equipment and on operating procedures will prevent and mitigate damage and personal injuries. Although the transfer of LHG falls under the existing requirements in 33 CFR part 126, the available data indicate that these requirements are not adequate. LHG presents hazards similar to those of LNG, when transferred in bulk, yet facilities that transfer LNG fall under much stricter regulatory requirements than those that transfer LHG. The Coast Guard is establishing new regulations for waterfront facilities handling LHG in 33 CFR part 127 that expand upon the regulations in part 126 and include requirements similar to those for LNG facilities already in part 127.

This rule is being implemented under the authority of the Ports and Waterways Safety Act (PWSA), as amended (33 U.S.C. 1221 et seq.) There, Congress declared that the safety of vessels and protection of the marine environment are matters of major national concern and that increased supervision of activities in ports is necessary. The PWSA authorized the Secretary of Transportation to take whatever measures are necessary to protect structures or areas of land in or adjacent to the navigable waters of the United States, including measures for the loading, movement, unloading, storage, and other handling of hazardous materials on waterfront facilities. The Coast Guard maintains that the hazards presented by these materials justify the measures in this rule for the handling of LHG.

Discussion of the Comments on and Changes to the NPRM

The Coast Guard received 26 letters commenting on the notice of proposed rulemaking (NPRM) entitled ''Waterfront Facilities Handling Liquefied Hazardous Gas'' published in the **Federal Register** on October 5, 1993. It considered those comments in developing this final rule.

1. Two comments stated that the regulations duplicate the requirements of both the Occupational Safety and Health Administration (OSHA) and the Environmental Protection Agency (EPA). The comments suggested that the Coast Guard work with these two agencies to avoid duplicative requirements and, thereby, reduce the regulatory burden on the industry. The Coast Guard concurs in part. So far as OSHA, EPA, or other agencies of the Federal government have established similar requirements, this rule permits the use of documents, procedures, or training established under those requirements to satisfy requirements of the Coast Guard. For example, this rule allows the substitution of requirements of OSHA (29 CFR 1910.120) and EPA (40 CFR 311.1), on training in hazardous-waste operations and emergency response, to meet the requirements in § 127.1302, so far as such training addresses these requirements.

Representatives of the Coast Guard and OSHA met to resolve potential duplicate requirements, however, and found that they do not exist to the extent suggested by the commenters. Under 29 CFR 1910.5(b), the requirements in 29 CFR part 1910 do not apply within the ''marine transfer area for LHG'' because the Coast Guard has elected to regulate this area. Requirements of OSHA do apply where the Coast Guard has not established comparable requirements within the marine transfer area. In spite of attempts to harmonize these requirements with those of other agencies, some differences persist because these address the hazards of operations on waterfront facilities transferring LHG in bulk more specifically than do the general standards for industry at large developed by OSHA and EPA. But these are matters of particularity, not outright conflict.

2. Coast Guard regulatory standards now require the primary weights and measures to be specified in metric units. Therefore, though no comment raised this issue, this rule specifies all weights and measures in metric units followed by English equivalents. The conversions of weights and measures ensure that equipment or procedures complying with the English values in the NPRM will also comply with the metric values in this rule. So the conversions should have no impact on compliance with this rule.

3. One comment recommended that the most current edition of the materials incorporated by reference be cited in this rule. The Coast Guard concurs, since the most current edition represents the latest thought and since it is difficult for industry to obtain copies of outdated standards anyway. Section 127.003 of this rule reflects the latest edition of each publication. Because the NPRM cited what are still the latest editions of (1) ANSI S12.13,

Part 1, Performance Requirements, Combustible Gas Detectors, (2) API RP 2003, Protection Against Ignitions Arising Out of Static, Lighting and Stray Currents, and (3) ASTM F–1121, International Shore Connections for Marine Applications, this rule cites the same editions. Because ANSI B16.5, Pipe Flanges and Flanged Fittings, has subsumed its standard, ANSI B16.31, Non-Ferrous Pipe Flanges, has dropped from the list of material incorporated by reference.

The Coast Guard compared the older editions of the standards listed in the NPRM that apply to LHG with the latest editions listed in this rule and found no significant changes between them. It did the same with editions that apply to LNG facilities and likewise found no significant changes between them. Consequently, the updating of standards incorporated by reference will have no impact on existing LNG facilities.

4. Three comments asked that existing LHG facilities be grandfathered out of the standards incorporated by reference in § 127.003. The Coast Guard does not concur. These standards are widely accepted and used by industry. They are minimal. To accept less would not achieve the desired level of safety. However, the COTPs may approve alternatives for existing facilities built to different standards if the alternatives yield an equivalent level of safety.

5. Seven comments sought clarification of the definition of the ''marine transfer area for LHG'' in § 127.005. The Coast Guard believes that it has adequately defined this area. The area encompasses the pier or wharf in its entirety, including the cargo manifold, as well as that part of piping cargo and vapor inland from the pier to the first shutoff valve. Here, ''inland'' refers to the direction along the piping away from the vessel. Some of the confusion on this issue resulted from a misprint in the NPRM that replaced ''LNG'' with ''LHG'' in the definition of ''Marine Transfer Area for LNG''. This error has been corrected in this rule. Any facility operator uncertain where the area ends should reach a written understanding with the COTP on where the COTP will enforce this rule.

6. Three comments stated that it would be difficult to provide specific vessel-arrival and cargo data in the ''Letter of Intent,'' as required by § 127.007(d)(5). The comments asserted that LHG facilities rarely know in advance the type of vessel or frequency of arrivals. Section 127.007(d)(5) does not require facilities to list specific vessel-arrival or cargo data. The purpose of the ''Letter of Intent'' is to give the COTP general notice of both the type and estimated number of LHG vessels that may call at the facility and the size of shipments. This information can easily be obtained from the facility-design specifications.

7. Two comments requested a 60-day phase-in period to allow time to prepare the letter of intent required under § 127.007 and a 6-month phase-in period to allow time to prepare the manuals required under § 127.019. The effective date of this rule will occur 180 days after publication of this rule in the **Federal Register**. This delay should provide enough time to comply with the requirements of this rule, including submitting, and if necessary amending, the letter of intent and all manuals.

8. Four comments requested clarification of the length of cargo piping that must be cleared of LHG before a vessel may disconnect. According to the comments, § 127.1101(c) requires the entire length of the piping from the dock to the storage tank to be cleared of LHG. This length of piping can run several hundred feet and take up to four hours to clear, with no significant improvement in safety. Section 127.1101(c) states that hoses and loading arms must be cleared. It does not refer to the piping. This rule does not require any part of the piping to be cleared of LHG before the disconnecting of the vessel.

9. Two comments alleged a conflict between §§ 127.1101 and 127.1321. Section 127.1101(c) requires bleeds and vents to allow LHG or its vapor to discharge to a safe area, while § 127.1321 bans the intentional release of LHG into the environment. This rule defines ''release,'' in § 127.005, to clarify this term. It allows a minor release of LHG or its vapor under certain conditions. But it in no way authorizes releases prohibited by other law. Section 127.110(c) clarifies the term ''safe area'' by adding the phrase ''such as a tank or flare'' to the end of the last sentence.

10. Two comments recommended limiting the applicability of § 127.1102(a) to ''each hose used in the marine transfer of LHG or its vapors.'' These requirements are to govern hoses used to transfer LHG or its vapors to or from vessels within the marine transfer area. In some cases hoses not used for the transfer of LHG or its vapors to or from vessels may be in the area, or hoses used for it may be outside the area. To clarify this point this rule revises § 127.1102(a).

11. Three comments asked that continuously manned docks be acceptable as a substitute for alarms on loading arms under § 127.1102(b)(4). While an alarm is the preferred method of alerting personnel that the loading arm is approaching the limits of its extension, personnel carefully watching the arm's extension can perform it, too. This rule amends § 127.1102(b)(4) to allow a personnel watch to substitute for an alarm if the operations manual establishes such a watch.

12. Two comments requested clarification of the term ''new construction'' in § 127.1103(a). The term ''new'' is defined in § 127.005. The term ''new construction'' means any piers, wharves, buildings, or pipelines constructed after the effective date of this rule. It also covers replacement of any existing piers, wharves, buildings, or pipelines. But it does not cover minor repairs or repairs made in kind to these.

Similarly, this rule modifies § 127.1105 to clarify that it applies only to new waterfront facilities handling LHG, and to all new construction in the marine transfer area for LHG of existing facilities. An introductory text, new paragraph (a) of § 127.1105, clarifies this point.

13. Five comments requested clarification of the requirements in § 127.1103. They wanted to know whether the substructure at an existing LHG facility has to comply with the fire-endurance requirements. Because industry standards generally grandfather existing construction, § 127.1103(b) is intended to apply only to new facilities and new construction as defined in § 127.005. To clarify this point, this rule revises § 127.1103(b) to read: ''Each substructure on a new waterfront facility handling LHG, and all new construction in the marine transfer area for LHG of each existing facility, * * *.''

14. One comment sought amendment of § 127.1107 to allow the use of equipment approved by organizations other than Underwriters Laboratories, Inc., and Factory Mutual Research Corporation, which are the only organizations whose approval NFPA 70 recognizes. While the Coast Guard has reserved the authority to allow approvals by other organizations acceptable to the Commandant in regulating vessels, it will not reserve as much in regulating waterfront facilities. Unlike vessels, waterfront facilities are subject to State and local authorities, who generally apply NFPA standards. If the Coast Guard applied standards different from those applied by State and local authorities, facility operators would have a harder time determining what equipment they could use. Consequently, § 127.1107 remains unchanged. Requests to recognize

approvals by other organizations should go to the appropriate NFPA committee.

15. Two comments requested clarification of § 127.1109 to indicate what surface would be the reference point for measuring illumination and where the requirement of 11-lux illumination applies. This rule revises § 127.1109 to indicate that illumination should be measured 1 meter (3.3 feet) above the walking surface and that the requirement of 11-lux illumination applies to the ''remainder of the marine transfer area for LHG''.

16. Two comments asked that § 127.1203 allow the use of fixed gas-detectors. The Coast Guard concurs, and § 127.1203 of this rule allows the use of fixed as well as portable gas-detectors.

17. Four comments recommended that § 127.1203(b) exempt facilities handling anhydrous ammonia from its requirement of gas-detectors. The comments asserted that anhydrous ammonia is detectable by smell at 1–2 parts per million (ppm) and is very offensive at 15–20 ppm, both amounts falling well below the Permissible Exposure Limit (PEL) of OSHA. Smell can indeed determine the presence of ammonia, although it cannot determine the concentration. That section does exempt facilities that handle anhydrous ammonia from its requirement of gas detectors. However, such facilities must assume that the PEL of OSHA had been exceeded whenever smell determines the presence of ammonia, unless a gas-detector determines a lower concentration.

18. One comment suggested that gas-detectors are of little value because products such as butane, propane, and propylene quickly evaporate when released. The Coast Guard does not concur. Although LHGs quickly evaporate when exposed to atmospheric temperature and pressure, many LHG vapors are heavier than air. Their vapors may remain at ground level, possibly in explosive concentrations, or may accumulate in sumps or nearby buildings, possible presenting hazardous conditions.

19. Six comments requested clarification of whether pumps or compressors not used in the transfer of LHG from a vessel to the facility or vice versa—for example, those used in the transfer of LHG to rail cars—are subject to the emergency-shutdown requirements in § 127.1205(c). The comments contend that for safety reasons facilities must be free to transfer LHG within the facility. Section 127.1205(c) applies only to those pumps and compressors that transfer LHG, or its vapors, to or from the vessel. It does not apply to other pumps or compressors within the facility. This rule now indicates that, when activated, the actuator must automatically shut down ''any terminal pumps or compressors used to transfer LHG, or its vapors, to or from the vessel.''

20. Eight comments recommended that the warning alarm proposed by § 127.1207 consist in either a light or a siren, not in both. The alarm required by this rule, like that proposed, consists in both a light capable of being seen, and a siren capable of being heard, at one mile. Three stated that the audibility of a siren may be diminished by engine-room noise aboard approaching vessels. Two stated that the visibility of a light may be limited by hilly terrain, river bends, and other obstructions. One stated that the alarm would cause confusion because without prior notice the public would not understand its significance.

The purpose of the alarms is to warn both persons at the facility and the general public, including passing marine traffic, of a hazard at the facility. The Coast Guard believes that the prescribed alarms, together, are the best means to warn everyone intended. It agrees that under certain circumstances one of the alarms may not be effective, but believes that this fact further validates the need for both alarms, rather than for either. A facility can always ask the COTP for approval of an alternative arrangement under § 127.017. Although alarms are more effective if a community knows what to expect, the Coast Guard believes that the facility operator should determine how to educate the community. Therefore, it has kept § 127.1207 as it proposed it.

21. Seven comments suggested that no facility handling toxic LHGs be responsible for providing respiratory protection under § 127.1209 to personnel other than its own (personnel servicing, delivering to, or belonging to the vessel, or servicing or delivering to the facility) who may have reason to be in the marine transfer area. A facility may not always know who these personnel are or how many of them would be in the area at any given time. One comment recommended that the respiratory protection be required only during transfers. the Coast Guard agrees that it may be difficult and impracticable for a facility to provide a sufficient number of respirators for everyone who may pass through the area. Accordingly, § 127.1209 requires facility operators to provide respiratory protection only for their employees since only those employees are likely to be in the area for any significant amount of time during transfers. That section also clarifies that the respiratory protection needs to be provided only during transfers.

22. Five comments recommended that the Coast Guard delete certain training requirements in § 127.1302 when a facility has fire or medical department of the facility or when such services are readily available from local governmental agencies. The Coast Guard does not concur. In many emergencies, properly trained transfer personnel will be the most effective resource to take immediate corrective action and thereby prevent minor incidents from becoming catastrophes. In some, even fire and medical departments located on the facility, but away from the marine transfer area, may not be able to arrive on scene in time. In others, it may be more effective for the facility to evacuate its transfer personnel and allow others to respond. In any event, properly trained transfer personnel afford the facility greater flexibility in determining how to respond.

To avoid unnecessary duplication, § 127.1302(d) accepts training performed to meet requirements of OSHA (29 CFR 1910.120) and EPA (40 CFR 311.1) on hazardous-waste operations and emergency response, to the extent that this training addresses the subjects in § 127.1302(a).

23. Two comments recommended that training in the ''configuration and limitations of LHG vessel cargo systems'', required by proposed § 127.1302(a)(7), be deleted. The comments stated that it is difficult for a facility to forecast the types of LHG vessels that will arrive at the terminal. Moreover, personnel of a facility do not board the vessels. This requirement does not mandate training in cargo systems of specific LHG vessels. Rather, it requires transfer personnel to be knowledgeable in the ''configuration and limitations'' of cargo systems of LHG vessels that may call at the facility. This knowledge is necessary so that these personnel understand the impact that their acts can have upon the vessel. Although changed editorially and renumbered as § 127.1302(a)(6), proposed § 127.1302(a)(7) remains unchanged in substance.

24. Four comments recommended that the requirements in § 127.1311 on movement and control of vehicles not apply to an LHG facility that handles only toxic cargoes since these cargoes do not present a fire hazard. One comment stated that this requirement would leave a large part of the facility inaccessible to vehicular traffic with no appreciable increase in safety.

The Coast Guard does not concur. Approaches to the marine transfer area, as much as the area itself, must stay

clear of vehicles to allow adequate escape routes and allow access for emergency vehicles in cases of injury as well as fire. Even if the LHG is not flammable, the pier, its equipment, or the vessel can catch fire and necessitate this access. Furthermore, similar requirements in 33 CFR part 126 already apply to existing LHG facilities. However, for consistency with the requirements for LHG facilities, the distance from storage containers, manifolds, loading arms, or independent mating flanges containing a flammable liquid or vapor has dropped from 30 to 15 meters.

25. Two comments suggested that § 127.1313 not apply to facilities that handle toxic LHGs. The Coast Guard does not concur. It is essential that the amount of hazardous material stored in the marine transfer area be restricted, to limit the risk of catastrophe. This material may still be stored nearby, outside the area.

26. Two comments stated that § 127.1313 prohibits the storage of fuel oil for such equipment as an emergency generator. The Coast Guard does not intend to preclude facilities from storing reasonable amounts of fuel oil for such equipment. Accordingly, § 127.1313(a)(2) of this rule allows facilities to store, in the marine transfer area, fuel ''required by * * * emergency equipment'' in the area. The term ''required by'' should limit the amount of fuel stored to the amount necessary in an emergency.

27. Four comments recommended that the Coast Guard delete the requirements in § 127.1315(i) for tests of the emergency shutdown and of the warning alarm before each transfer. The comments asserted that these tests would disrupt facilities with frequent transfers and that repeated tests of the alarm might cause a local community to disregard it altogether. One comment recommended tests of these items every month, two recommended tests of them every two months, and one recommended tests of them every year. The Coast Guard concurs that tests before each transfer would be an excessive burden for some facilities. OSHA (29 CFR 1910.165(d)(2)) requires tests every two months. For the emergency shutdown, tests every two months should be adequate. But, for the warning alarms required under this rule, which can upset a local community, tests every six months would be more appropriate. These tests could be easier to conduct in conjunction with a community-education campaign to increase awareness of their meaning. Sections 127.1315(i) (3) and (4) have been deleted from the final rule. Sections 127.1407 (e) and (f), requiring tests of the emergency shutdown every two months and of the warning alarm every six months, have been added to the final rule. If transfers of LHG occur less often than the designated intervals, these tests may be conducted before each transfer instead of at the designated interval.

28. Nine comments stated that the requirement in § 127.1319(a), that the facility notify the COTP 24 hours before a transfer of LHG, is unrealistic and perhaps unattainable because a facility rarely knows that far in advance the time a vessel will arrive. Frequent changes in the time, due to weather, tides, schedule changes, or other operational constraints, do occur. Two comments suggested that the COTP and the facility should agree on how far in advance the facility should notify the COTP. Three comments recommended a requirement that the facility notify the COTP 4 hours before a transfer. The purpose of any such requirement is to notify the Coast Guard of transfers early enough that its personnel can periodically witness the transfers. Otherwise, the Coast Guard cannot effectively enforce its rules. 33 CFR 126.27 now requires ''prior notification'' without specifying the amount. The Coast Guard believes that reducing the notice from 24 to 4 hours is reasonable and has modified § 127.1319(a) of this rule accordingly. (The Coast Guard nonetheless encourages facilities to give as much notice as they can so the Coast Guard can deploy its resources as efficiently as it can.)

29. Three comments complained that § 127.1319 does not clearly indicate whether the person in charge (PIC) may supervise more than one transfer at one time. Section 127.1319(b)(1) insists that the PIC have ''no other assigned duties during the transfer.'' Supervising an additional transfer would constitute having another assigned duty. Generally, it is not safe for a single PIC to supervise more than one transfer at one time. However, supervising multiple transfers may be safe because of other trained personnel involved in the transfers or it may become necessary because of an emergency. To clarify this issue, a new § 127.1319(b)(2) indicates that the PIC may not supervise transfers to or from more than one vessel at a time unless authorized by the COTP. Proposed paragraphs (2) and (3) have become (3) and (4) respectively.

30. One comment was concerned that § 127.1319(c)(3)(i) requires a facility to discontinue the transfer of LHG that is not flammable when an electrical storm approaches. Another was concerned that § 127.1319(c)(3)(ii) requires the facility to discontinue the transfer in cases of routine operational releases. The Coast Guard concurs and has amended § 127.1319(c)(3) to clarify both issues.

31. One comment stated that the rule does not clearly require cargo hoses and loading arms to be drained and depressurized before being disconnected from a vessel. Section 127.1101 requires ''an isolation valve with a bleed connection, such that transfer hoses and loading arms can be blocked off, drained or pumped out, and depressurized before disconnecting''; however, nothing requires any act. To clarify this point a new § 127.1319(d) requires that hoses and loading arms be drained and depressurized before being disconnected from a vessel. (Two major casualties on waterfront facilities resulted from not carrying out this procedure.)

32. Twelve comments asked that the Coast Guard define ''release'' as used in § 127.1321. The NPRM would have required that, upon ''release'' of LHG or its vapor, a facility stop the transfer, notify the COTP, and not resume the transfer until authorized by the COTP. Because it specified no amount of ''release'', it would have required these measures even if the amount would not cause harm to human health or the environment. The commenters expressed concern that, as a rule, it would disrupt operations for minor releases that typically accompany connections and disconnections of hoses, tank gauging, sampling, and other routine operations. For example, it could prohibit the use of slip tubes (devices for gauging) because using a slip tube releases minor amounts of vapor.

The Coast Guard agrees that a definition of ''release'' is necessary to determine when a transfer should stop. The Coast Guard has never intended to prohibit minor, routine releases unless they cause harm to human health or the environment. It has defined ''release'' in § 127.005 of this rule to clarify for which releases the transfers must stop and be reported to the COTP. For the purposes of this part a ''release'' is any spilling, leaking, pumping, pouring, emitting, emptying, discharging, injecting, escaping, leaching, dumping, or disposing into the environment, except a minor release of LHG, or its vapor, that may occur during the routine handling of LHG. No release is minor if it creates an atmosphere that exceeds the Lower Flammable Limit (LFL) for a flammable product or any PEL listed in 29 CFR part 1910.1000, Table Z–1 or Z–2, for a toxic product. This definition of ''release'' is similar to that of

''discharge'' in the National Response Plan (40 CFR 300.5) except that it also looks to flammability and exposure. Flammability and exposure make sense as criteria because releases of some LHGs will meet them long before the releases amount to a ''reportable quantity'' under 40 CFR part 302, and it is difficult to verify the size of a release of liquefied gas after it vaporizes.

To further reduce the potential for frequent activation of the warning alarms, § 127.1321(a)(2) now requires their activation only for releases that ''threaten vessels or persons outside the immediate transfer area.'' This should eliminate the need to activate the warning alarms for releases that, while more than minor, are small in that they do not threaten persons outside the area. Generally, other means will notify persons inside the area.

33. Three comments disliked the requirement in § 127.1325(c) to provide security guards. They argued that facilities cannot identify personnel, check ID cards, escort personnel, or perform other activities normally done by the guards. One suggested that facilities using public docks be exempt because they control neither the docks nor the persons who use them. Two recommended that § 127.1325 apply only during transfers.

The Coast Guard does not concur. Access to the transfer area must be limited to reduce the risk of fire, explosion, or other calamities resulting from vandalism or sabotage. Unless the piping and storage tanks on the facility contain no LHG, and no LHG vapors, the potential for a hazardous release exists even when no transfer is in progress. In many cases, access to critical parts of the area may be effectively restricted by means other than guards. (Unfortunately, these means and where they will be acceptable are too numerous to list within this rulemaking. Section 127.1325(c) lets the COTP approve alternative means such as electronic monitoring or random patrols where the stationing of guards is impracticable.)

34. One comment claimed that, because of the manpower entailed, it was not reasonable to escort each person entering a facility. The Coast Guard acknowledges that there are other good ways to prevent sabotage and vandalism. Ensuring that persons entering the facility have legitimate business on the facility, and display visitors' badges to show they have been identified, should suffice. Badges will help employees distinguish between authorized and unauthorized personnel. Section 127.1325(b) reflects this change.

35. Six comments objected to conducting static liquid-pressure (hydrostatic) tests of the piping, hoses, and loading arms of the LHG-transfer system, as required by § 127.1407(a). Instead, they suggested using alternatives such as pneumatic tests.

Hydrostatic tests of cargo piping and hoses are already the rule of 33 CFR 126.15(o)(7)(iv). No comments indicated that this rule has disrupted facilities. The Coast Guard believes that these tests provide the safest and most effective means of determining the integrity of piping and hoses. Nevertheless, the COTP may allow alternatives under § 127.017, if they provide the same degree of safety. (Authorities have granted waivers for some existing facilities under 33 CFR 126.11, and those waivers should continue.) To ease compliance, § 127.1407(b) reduces the pressure for the test from 1.5 times the maximum allowable working pressure (MAWP) to 1.1 times the MAWP because some LHGs are normally transferred at low working pressures.

36. One comment suggested recasting § 127.1407(a) to clarify which components of the cargo system need tests. Section 127.1407(a) applies only to that part of the system located in the marine transfer area. The section now says as much.

37. Four comments recommended that the firefighting requirements in §§ 127.1501 through 127.1511 not apply to facilities that handle only toxic LHGs. Six comments suggested that the water-systems requirements in § 127.1507 not apply to these facilities. Four comments recommended that the requirements of an international shore-connection in § 127.1511 not apply to these facilities. The Coast Guard concurs with these comments in part.

Section 127.1501 requires a facility to determine the number, kind, and site of equipment for fire detection, protection, control, and extinguishment on the basis of local conditions and hazards within the facility. This lets the facility determine the number, kind, and site of equipment for these purposes on the basis of its design and anticipated risks.

A facility that handles only toxic LHGs must determine whether its design and anticipated risks call for the equipment specified in § 127.1507. Although no water may be needed for fighting fire in LHG when a facility does not handle flammable LHG, it is a prime component of a facility's overall fire-control efforts. It may be necessary to protect the pier, the buildings, or vessels even if not to fight a fire involving LHG. It is an excellent cooling agent; it effectively protects personnel from fire and protects sprayed areas from radiated heat. It can also remove some toxic gases from the air after a release of toxic LHG. Therefore, it is usually essential in mitigating death, injury, damage to equipment, and further spreading of a fire, even if the LHG is not flammable.

The international shore-connection is to protect vessels, not the facility. Therefore, the design and capability of vessels are more important than area features of the facility for one determining whether this equipment is necessary.

If, after careful consideration of its own design and of the anticipated risks, a facility that handles toxic LHGs decides it does not need the water supply required by § 127.1507, then it must justify this decision in the plan required by § 127.1501. The plan must consider pier and vessel fires in addition to cargo fires. Existing facilities may certify their own plans. New facilities, and facilities with any new construction, must have their plans reviewed and approved by the COTP.

An international shore-connection makes it possible for fittings with incompatible threads to connect. One is required on the facility so that vessels moored to the facility have a source of water for firefighting in case an onboard source of firefighting water is nonexistent or inadequate. Incompatible threads generally are not a problem for U.S.-flag vessels, and some facilities do not receive foreign-flag vessels. To account for this, § 127.1511 now requires an international shore-connection only for those facilities that receive foreign-flag vessels.

38. Five comments recommended that a facility with an on-site fire department or with access to a local department be exempt from the requirement in § 127.1505 to provide emergency outfits. The intent of this requirement is to enable rapid response for injured or trapped personnel. An on-site department with appropriate outfits will meet the requirement since the outfits have never had to be located within the marine transfer area. The Coast Guard agrees that in some cases an off-site response unit, if trained and if located close enough to the area, may be able to provide an effective response. To confer greater flexibility, § 127.1505, renamed ''Emergency response and rescue'', allows the use of either on-site or off-site response to emergencies. An on-site response unit must furnish the appropriate training and equipment, including outfits. Training and equipment that satisfy OSHA [29 CFR 1910.120] will satisfy the Coast Guard. An off-site response unit must enter a written agreement with the facility

indicating the services it will perform and the time within which it will perform them to personnel in the area.

Incorporation by Reference

The Director of the Federal Register has approved the material in § 127.003 for incorporation by reference under 5 U.S.C. 552 and 1 CFR part 51. The material is available as indicated in that section.

Regulatory Evaluation

This not a significant regulatory action under section 3(f) of Executive Order 12866 and does not require an assessment of potential costs and benefits under section 6(a)(3) of that Order. It has not been reviewed by the Office of Management and Budget under that Order. It is not significant under the regulatory policies and procedures of the Department of Transportation (DOT) [44 FR 11040 (February 26, 1979)]. A Regulatory Evaluation under paragraph 10e of the regulatory policies and procedures of DOT has been prepared and is available in the docket for inspection or copying where indicated under **ADDRESSES.** A summary follows.

This rule may produce discounted costs of about $17.3 million over the next 25 years. Most of these costs will be borne by the waterfront facilities regulated, with the remainder borne by the Coast Guard. This rule will affect about 137 waterfront facilities. Over half of those facilities also handle products subject to the pollution-prevention regulations in 33 CFR parts 154 and 156, which contain similar requirements. Costs to industry will arise primarily from purchase, replacement, and maintenance of equipment, and secondarily from training personnel and from collecting information. This rule should produce benefits of about $4.8 million in discounted property damages prevented, of 6 deaths prevented, and of 147 injuries prevented over the next 25 years. The cost of achieving these benefits is less than the value of life based on willingness to pay, assumed by most economists; therefore, this rule is cost-beneficial. It may also produce environmental benefits by preventing the release of LHGs into the environment, although those benefits might be slight, over the same span. Further details on the costs and benefits of this rule appear in the Regulatory Evaluation.

No comments concerned this section or the draft Regulatory Evaluation. The changes made in this rule will slightly reduce the economic impact, but should not significantly reduce the benefits, of this rule. The most significant changes are: exempting existing facilities from certain design requirements, allowing an alternative to providing emergency outfits, allowing an alternative to having an alarm on a loading arm, clarifying when transfers must be shut down, shortening the time before transfers for notifying the Coast Guard, extending the frequency of certain tests, allowing fixed gas-detection systems to be used in lieu of portable gas-detectors, and exempting ammonia facilities from gas-detectors entirely.

Small Entities

Under the Regulatory Flexibility Act [5 U.S.C. 601 *et seq.*], the Coast Guard must consider whether this rule will have a significant economic impact on a substantial number of small entities. ''Small entities'' may include (1) small businesses and not-for-profit organizations that are independently owned and operated and are not dominant in their fields and (2) governmental jurisdictions with populations of less than 50,000.

This rule is not expected to affect any waterfront facilities owned or operated by a small entity. A recent review of the ownership and operation of waterfront facilities handling LHG in bulk did not reveal any owned by small entities as defined under the Regulatory Flexibility Act. No comments concerning small entities were received in response to the NPRM. An entity large or small, could avoid the impact of this rule by originating and receiving shipments of LHG in portable tanks, tank trucks, or rail cars rather than transferring in bulk from a vessel. Therefore, the Coast Guard certifies under 5 U.S.C. 605(b) that this rule will not have a significant economic impact on a substantial number of small entities.

Collection of Information

This rule contains collection-of-information requirements. The Coast Guard has submitted the requirements to the Office of Management and Budget (OMB) for review under section 3504(h) of the Paperwork Reduction Act [44 U.S.C. 3501 *et seq.*], and OMB has approved them. The section numbers and control numbers from OMB are as follows:

Section	Topic
127.007	Letter of intent.
127.015	Appeals.
127.017	Alternatives
127.019, 127.305, 127.1305.	Operations Manual.
127.019, 127.307, 127.1307.	Emergency Manual.
127.301, 127.1301	[Certification of PIC].
127.317, 127.1317	Decelaration of Inspection.
127.409, 127.1409	Records [of maintenance].
127.617, 127.1603	Hotwork [permits].

The estimated annual burden is significantly different from that estimated in the NPRM. That did not reflect the significantly reduced burden in subsequent years after the one-time initial burden of developing manuals. The following particulars apply:

DOT No: 2115.

(1) OMB Control No.: 0052.

Administration: U.S. Coast Guard.

Title: Waterfront Facilities Handling Liquefied Natural Gas and Liquefied Hazardous Gas (known to OMB as: Liquefied Natural Gas and Liquefied Hazardous Gas Waterfront Facilities)

Need for Information: To prevent, or mitigate the results of, release of liquefied natural gas and liquefied hazardous gases at waterfront facilities.

Proposed use of Information: To verify compliance with safety regulations and for program management, planning, and evaluation.

Frequency of Response: On occasion.

Burden Estimate: 3,531 hours per year.

Respondents: 137.

Forms: None.

Average Burden Hours Per Respondent: 3.1 hours per year.

(2) OMB Control No.: 0013.

Administration: U.S. Coast Guard.

Title: Welding and Hot-Work Permit

Need for Information: To restrict welding and other hot work on certain waterfront facilities to prevent fires and explosions.

Proposed use of Information: To ensure compliance with safety regulations.

Frequency of Response: On occasion.

Burden Estimate: 2,190 hours per year.

Respondents: 730.

Forms: None.

Average Burden Hours per Respondent: 2.5 hours per year.

Federalism

The Coast Guard has analyzed this rule in accordance with the principles and criteria contained in Executive Order 12612, and has determined that this proposal does not have sufficient implications for federalism to warrant the preparation of a Federalism Assessment. This rule sets minimal safety standards for the operation of waterfront facilities transferring LHG to or from vessels in bulk. Since these are minimal standards, State and local governments are free to set higher standards where necessary for local

conditions. Therefore, this rule preempts State action to set lower safety standards, but does not preempt State action to set higher safety standards, for waterfront facilities transferring LHG.

Environment

The Coast Guard has considered the environmental impact of this rule and concluded that, under section 2.B.2 of Commandant Instruction M16475.1B, this rule is categorically excluded from further environmental documentation. This rule will prevent or mitigate releases of LHG and will have no adverse impact on the environment. A Determination of Categorical Exclusion is available in the docket for inspection or copying at the address under **ADDRESS.**

List of Subjects

33 CFR Part 126

Explosives, Harbors, Hazardous substances, Reporting and recordkeeping requirements.

33 CFR Part 127

Harbors, Hazardous substances, Incorporation by reference, Natural gas, Security measures, Vessels, Reporting and recordkeeping requirements.

For the reasons set out in the preamble, the Coast Guard amends 33 CFR parts 126 and 127 as follows:

PART 126—[AMENDED]

1. The authority citation for part 126 continues to read as follows:

Authority: 33 U.S.C. 1231; 49 CFR 1.46(n)(4).

§ 126.05 [Amended]

2. Section 126.05(a) is amended by removing the words ''other than the cargoes listed in § 126.10(d)''.

§ 126.10 [Amended]

3. Section 126.10 is amended by removing paragraph (d).

§ 126.15 [Amended]

4. Section 126.15 is amended by removing paragraph (o).

PART 127—[AMENDED]

5. The authority citation for part 127 continues to read as follows:

Authority: 33 U.S.C. 1231; 49 CFR 1.46(n)(4).

6. The heading of part 127 is revised to read as follows:

PART 127—WATERFRONT FACILITIES HANDLING LIQUEFIED NATURAL GAS AND LIQUEFIED HAZARDOUS GAS

7. Section 127.001 is revised to read as follows:

§ 127.001 Applicability.

(a) Subparts A and B of this part apply to the marine transfer area for LNG of each new waterfront facility handling LNG and to new construction in the marine transfer area for LNG of each existing waterfront facility handling LNG.

(b) Subpart A of this part and §§ 127.301 through 127.617 apply to the marine transfer area for LNG of each active existing waterfront facility handling LNG.

(c) Sections 127.007 (c), (d), and (e); 127.019(b); and 127.701 of subparts A and B of this part apply to the marine transfer area for LNG of each inactive existing facility.

(d) Subparts A and C of this part apply to the marine transfer area for LHG of each active waterfront facility handling LHG.

(e) Sections 127.007 (c), (d), and (e); 127.019(b); and 127.1325(c) of subparts A and C of this part apply to the marine transfer area for LHG of each inactive facility.

8. Section 127.003 is revised to read as follows:

§ 127.003 Incorporation by reference.

(a) Certain material is incorporated by reference into this part with the approval of the Director of the Federal Register in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. To enforce any edition other than that specified in paragraph (b) of this section, the Coast Guard must publish notice of change in the **Federal Register** and make the material available to the public. All approved material is on file at the Office of the Federal Register, Room 700, 800 North Capitol Street NW., Washington, DC 20408, and at the U.S. Coast Guard, (G–MPS), Room 1108, 2100 Second Street SW., Washington, DC 20593–0001, and is available from the sources indicated in paragraph (b) of this section.

(b) The material approved for incorporation by reference in this part, and the sections affected, are:

The American National Standards Institute (ANSI)	
1430 Broadway, New York, NY 10018:	
ANSI B16.5, Pipe Flanges and Flanged Fittings 1988, including 1992 Addenda and Errata	127.1102
ANSI S12.13, Part 1, Performance Requirements, Combustible Gas Detectors, 1986	127.1203
American Petroleum Institute (API)	
1220 L Street NW., Washington, DC 20005:	
API RP 2003, Protection Against Ignitions Arising Out of Static, Lightning and Stray Currents, 1991	127.1101
American Society of Mechanical Engineers (ASME)	
345 East 47th Street, New York, NY 10017:	
ASME B31.3, Chemical Plant and Petroleum Refinery Piping, 1993	127.1101
American Society for Testing and Materials (ASTM)	
1916 Race Street, Philadelphia, PA 19103:	
ASTM F–1121, International Shore Connections for Marine Applications, 1987 (reapproved 1993)	127.1511
National Fire Protection Association (NFPA)	
Batterymarch Park, Quincy, MA 02269:	
NFPA 10, Portland Fire Extinguishers, 1994	127.603; 127.1503
NFPA 30, Flammable and Combustible Liquids Code, 1993	127.313; 127.1313
NFPA 51B, Fire Prevention in Use of Cutting and Welding Processes, 1994	127.405; 127.1405
NFPA 59A, Production, Storage, and Handling of Liquefied Natural Gas (LNG), 1994	127.101; 127.201; 127.405; 127.603

NFPA 70, National Electrical Code, 1993	127.107; 127.201; 127.1107
NFPA 251, Fire Tests of Building Construction and Materials, 1990	127.005

9. § 127.005 is amended by revising the definitions for the terms ''active'', ''existing'', ''impounding space'', ''LNG vessel'', and ''new''; by removing the definitions for the terms ''LNG waterfront facility'' and ''marine transfer area''; and by adding definitions for the terms ''facility'', ''flammable product'', ''LHG'', ''LHG vessel'', ''liquefied hazardous gas'', ''LNG'', ''marine transfer area for LHG'', ''marine transfer area for LNG'', ''mating flange'', ''MAWP'', ''release'', ''toxic product'', ''waterfront facility handling LHG'', and ''waterfront facility handling LNG'', in alphabetical order, to read as follows:

§ 127.005 Definitions.

* * * * *

Active means accomplishing the transfer of LHG or LNG, or scheduling one to occur, within 12 months of the current date.

* * * * *

Existing as applied to a waterfront facility means a facility handling LNG constructed or being constructed under a contract awarded before June 2, 1988, or a facility handling LHG constructed or being constructed under a contract awarded before January 30, 1996.

Facility means either a waterfront facility handling LHG or a waterfront facility handling LNG.

* * * * *

Flammable product means a product indicated by the letter ''F'' or by the letters ''F + T'' in Table 1 to this part.

* * * * *

Impounding space means a space formed by dikes and floors that confines a spill of LHG or LNG.

LHG means liquefied hazardous gas.

LHG vessel means a vessel constructed or converted to carry LHG, in bulk.

Liquefied hazardous gas (LHG) means a liquid containing one or more of the products listed in Table 1 to this part.

* * * * *

LNG means liquefied natural gas.

LNG vessel means a vessel constructed or converted to carry LNG, in bulk.

* * * * *

Marine transfer area for LHG means that part of a waterfront facility handling LHG between the vessel, or where the vessel moors, and the first shutoff valve on the pipeline immediately inland of the terminal manifold or loading arm, including the entire part of a pier or wharf used to serve LHG vessels.

Marine transfer area for LNG means that part of a waterfront facility handling LNG between the vessel, or where the vessel moors, and the last manifold or valve immediately before the receiving tanks.

Mating flange means that flange in the product-transfer pipeline on a waterfront facility handling LHG or a waterfront facility handling LNG that connects this pipeline to the pipeline or transfer hose of the vessel.

* * * * *

MAWP means maximum allowable working pressure.

New as applied to a waterfront facility means a facility handling LNG constructed or being constructed under a contract awarded on or after June 2, 1988, or a facility handling LHG constructed or being constructed under a contract awarded on or after January 30, 1996.

* * * * *

Release means any spilling, leaking, pumping, pouring, emitting, emptying, discharging, injecting, escaping, leaching, dumping, or disposing into the environment, except a minor release of LHG or its vapor, that may occur during the routine handling of LHG. No release is minor if it creates an atmosphere that exceeds the Lower Flammable Limit (LFL) for a flammable product or any Permissible Exposure Limit (PEL) listed in 29 CFR 1910.1000, Table Z–1 or Z–2, for a toxic product.

Toxic product means a product indicated by the letter ''T'' or by the letters ''F+T'' in Table 1 to this part.

Waterfront facility handling LHG means any structure on, in, or under the navigable waters of the United States, or any structure on land or any area on shore immediately adjacent to such waters, used or capable of being used to transfer liquefied hazardous gas, in bulk, to or from a vessel.

Waterfront facility handling LNG means any structure on, in, or under the navigable waters of the United States, or any structure on land or any area on shore immediately adjacent to such waters, used or capable of being used to transfer liquefied natural gas, in bulk, to or from a vessel.

§ 127.007 [Amended]

§ 127.009 [Amended]

§ 127.013 [Amended]

§ 127.019 [Amended]

§§ 127.007, 127.009, 127.013, 127.019 [Amended]

10. Part 127 is amended by adding the phrase ''LHG or'' before the term ''LNG'' wherever the latter appears in the following:

a. § 127.007(c).
b. § 127.007(d)(5).
c. § 127.007(d)(6).
d. § 127.007(e)(2).
e. The introductory text of § 127.009.
f. The introductory text of § 127.013(a).
g. § 127.019(b).

§ 127.011 [Amended]

11. § 127.011 is amended by revising the heading to read ''Inspections of Waterfront Facilities.''

§ 127.019 [Amended]

12. § 127.019(c) is amended by removing the words ''§ 127.305 and the Emergency Manual meets § 127.307'' and adding in their place the words ''§ 127.305 or § 127.1305 and that the Emergency Manual meets § 127.307 or § 127.1307''.

Subparts B, C, D, E, F, G, and H—[Amended]

13. Subparts C, D, E, F, G, and H of this part are amended by removing their headings and leaving those headings as undesignated text headings, by removing the undesignated text heading ''Fire Equipment'' before § 127.601, and by removing the undesignated text heading ''Fire Protection'' before § 127.613; and Subpart B is amended by revising its heading to read as follows:

Subpart B—Waterfront Facilities Handling Liquefied Natural Gas

§§ 127.101, 127.109, 127.111, 127.113, 127.203, 127.207, 127.305, 127.313, 127.315, 127.319, 127.607, 127.609, 127.611, 127.613, 127.615, 127.701, 127.703, 127.705, and 127.711 [Amended]

14. Part 127 is amended by replacing the words ''marine transfer area'' wherever they appear with the words ''marine transfer area for LNG'' in the following:

a. The introductory text of § 127.101.
b. § 127.109(a).
c. § 127.111(a).

d. § 127.113(a), introductory text.
e. § 127.203.
f. §§ 127.207 (a) and (b).
g. §§ 127.305 (d) and (e).
h. § 127.313(a) introductory text.
i. § 127.315(g).
j. §§ 127.319 (a)(1) and (b)(3)(i).
k. The introductory text of § 127.603.
l. § 127.607(a).
m. § 127.609(a).
n. § 127.611.
o. § 127.613.
p. § 127.615.
q. The heading of § 127.703.
r. § 127.703(a), introductory text, and (b).
s. The introductory text of § 127.705.
t. § 127.711.

§ 127.105 [Amended]

15. § 127.105 is amended by revising the heading to read ''Layout and spacing of marine transfer area for LNG.''

§§ 127.103, 127.105, 127.301, 127.303, 127.305, 127.307, 127.309, 127.317, 127.319, 127.321, 127.401, 127.703, and 127.711 [Amended]

16. Part 127 is further amended by replacing the word ''facility'' with the phrase ''waterfront facility handling LNG'' wherever it appears in the following:
a. § 127.103(a).
b. § 127.105(a).
c. §§ 127.301(a) introductory text, and (b).
d. § 127.303.
e. § 127.305(d).
f. § 127.307(f).
g. § 127.309(a).
h. §§ 127.317 (b) and (c)(1).
i. § 127.319(a) introductory text.
j. § 127.321(a) introductory text.
k. § 127.401.
l. §§ 127.703 (a)(1) and (b).
m. § 127.711.

§ 127.405 [Amended]

17. § 127.405(a)(1) is amended by replacing the words ''subparts B, C, G, and H of this part'' with the words ''this subpart''.

18. A new subpart C, consisting of §§ 127.1101 through 127.1605, is added to read as follows:

Subpart C—Waterfront Facilities Handling Liquefied Hazardous Gas

Sec.

Design and Construction

Equipment

Operations

Maintenance

Firefighting Equipment

Fire Protection

Design and Construction

§ 127.1101 Piping systems.

Each piping system within the marine transfer area for LHG used for the transfer of LHG must meet the following criteria:

(a) Each system must be designed and constructed in accordance with ASME B31.3.

(b) Each pipeline on a pier or wharf must be located so that it is not exposed to physical damage from vehicular traffic or cargo-handling equipment. Each pipeline under navigable waters must be covered or protected to meet 49 CFR 195.248.

(c) The transfer manifold of each liquid transfer line and of each vapor return line must have an isolation valve with a bleed connection, such that transfer hoses and loading arms can be blocked off, drained or pumped out, and depressurized before disconnecting. Bleeds or vents must discharge to a safe area such as a tank or flare.

(d) In addition to the isolation valve at the transfer manifold, each liquid-transfer line and each vapor return line must have a readily accessible isolation valve located near the edge of the marine transfer area for LHG.

(e) Each power-operated isolation valve must be timed to close so that it will not produce a hydraulic shock capable of causing failure of the line or equipment. Unless the layout of the piping allows the isolation valve at the transfer manifold to close within 30 seconds without creating excessive stresses on the system, the layout must be reconfigured to reduce the stresses to a safe level.

(f) Each waterfront facility handling LHG that transfers to or from a vessel requiring vapor return during transfer must be equipped with a vapor return line designed to attach to the vessel's vapor connection.

(g) Where two or more LHGs are loaded or unloaded at the same facility, each manifold must be identified or marked to indicate each LHG it handles.

(h) Each pipeline used to transfer flammable liquids or vapors must be provided with precautions against static, lightning, and stray current in accordance with API RP 2003.

§ 127.1102 Transfer hoses and loading arms.

(a) Each hose within the marine transfer area for LHG used for the transfer of LHG or its vapors to or from a vessel must—

(1) Be made of materials resistant to each LHG transferred, in both the liquid and vapor state (if wire braid is used for reinforcement, the wire must be of corrosion-resistant material, such as stainless steel);

(2) Be constructed to withstand the temperature and pressure foreseeable during transfer, with a MAWP not less than the maximum pressure to which it may be subjected and at least 1030 kPa gauge (149.4 psig);

(3) Be designed for a minimum bursting pressure of a least five times the MAWP;

(4) Have—

(i) Full-threaded connections;

(ii) Flanges that meet ANSI B16.5; or

(iii) Quick connect couplings that are acceptable to the Commandant;

(5) Be adequately supported against the weight of its constituent parts, the LHG, and any ice formed on it;

(6) Have no kinks, bulges, soft spots, or other defects that will let it leak or burst under normal working pressure; and

(7) Have a permanently attached nameplate that indicates, or otherwise be permanently marked to indicate—

(i) Each LHG for which it is suitable;
(ii) Its MAWP at the corresponding service temperature; and
(iii) If used for service at other than ambient temperature, its minimum service temperature.
(b) Each loading arm used for the transfer of LHG or its vapor must—
(1) Be made of materials resistant to each LHG transferred, in both the liquid and vapor state;
(2) Be constructed to withstand the temperature and pressure foreseeable during transfer;
(3) Be adequately supported against the weight of its constituent parts, the LHG, and any ice formed on it;
(4) Be provided with an alarm to indicate when it is approaching the limits of its extension, unless the examined Operations Manual requires a person to perform the same function; and
(5) Have a permanently attached nameplate that indicates, or otherwise be permanently marked to indicate—
(i) Each LHG it may handle;
(ii) Its MAWP at the corresponding service temperature; and,
(iii) If it is used for service at other than ambient temperature, its minimum service temperature.

§ 127.1103 Piers and wharves.

(a) Each new waterfront facility handling LHG, and all new construction in the marine transfer area for LHG of each existing facility, must comply with the standards for seismic design and construction in 49 CFR part 41.
(b) Each substructure on a new waterfront facility handling LHG, and all new construction in the marine transfer area for LHG of each existing facility, except moorings and breasting dolphins, that supports or is within 4.5 meters (14.8 feet) of any pipe or equipment containing a flammable LHG, or that is within 15 meters (49.2 feet) of a loading flange used to transfer a flammable LHG, must have a fire-endurance rating of not less than two hours.

§ 127.1105 Layout and spacing of marine transfer area for LHG.

Each new waterfront facility handling LHG, and all new construction in the marine transfer area for LHG of each existing facility, must comply with the following:
(a) Each building, shed, and other structure within each marine transfer area for LHG must be located, constructed, or ventilated to prevent the accumulation of flammable or toxic gases within the structure.
(b) Each impounding space for flammable LHGs located within the area must be designed and located so that the heat flux from a fire over the impounding space does not cause, to a vessel, damage that could prevent the vessel's movement.
(c) Each manifold, loading arm, or independent mating flange must be located at least 60 meters (197 feet) from each of the following structures, if that structure is intended primarily for the use of the general public or of railways:
(1) A bridge crossing a navigable waterway.
(2) The entrance to, or the superstructure of, a tunnel under a navigable waterway.
(d) Each manifold, loading arm, or independent mating flange must be located at least 30 meters (98.5 feet) from each public roadway or railway.

§ 127.1107 Electrical systems.

Electrical equipment and wiring must be of the kind specified by, and must be installed in accordance with, NFPA 70.

§ 127.1109 Lighting systems.

(a) Each waterfront facility handling LHG, at which transfers of LHG take place between sunset and sunrise, must have outdoor lighting that illuminates the marine transfer area for LHG.
(b) All outdoor lighting must be located or shielded so that it cannot be mistaken for any aids to navigation and does not interfere with navigation on the adjacent waterways.
(c) The outdoor lighting must provide a minimum average illumination on a horizontal plane 1 meter (3.3 feet) above the walking surface of the marine transfer area that is—
(1) 54 lux (5 foot-candles) at any loading flange; and
(2) 11 lux (1 foot-candle) for the remainder of the marine transfer area for LHG.

§ 127.1111 Communication systems.

(a) The marine transfer area for LHG must possess a communication system that enables continuous two way voice communication between the person in charge of transfer aboard the vessel and the person in charge of transfer for the facility.
(b) The communication system required by paragraph (a) of this section may consist either of fixed or portable telephones or of portable radios. The system must be usable and effective in all phases of the transfer and all weather at the facility.
(c) Devices used to comply with paragraph (a) of this section during the transfer of a flammable LHG must be listed as intrinsically safe by Underwriters Laboratories, Inc., Factory Mutual Research Corporation, or other independent laboratory recognized by NFPA, for use in the hazardous location in which it is used.

§ 127.113 Warning signs.

(a) The marine transfer area for LHG must have warning signs that—
(1) Meet paragraph (b) of this section;
(2) Can be seen from the shore and the water; and,
(3) Except as provided in paragraph (c) of this section, bear the following text:

Warning
Dangerous Cargo
No visitors
No Smoking
No Open Lights

(b) Each letter on the sign must be—
(1) In block style;
(2) Black on a white background; and
(3) At least 7.6 centimeters (3 inches) high.
(c) The words ''No Smoking'' and ''No Open Lights'' may be omitted when the product being transferred is not flammable.

Equipment

§ 127.1203 Gas detection.

(a) Each waterfront facility handling LHG that transfers a flammable LHG must have at least two portable gas detectors, or a fixed gas detector, in the marine transfer area for LHG. Each detector must be capable of indicating whether the concentration of flammable vapors exceeds 30% of the Lower Flammable Limit for each flammable product being transferred and must meet ANSI S12.13, Part 1.
(b) Each waterfront facility handling LHG that transfers a toxic LHG, other than anhydrous ammonia, must have at least two portable gas detectors, or a fixed gas detector, available in the area. The detectors must be capable of showing whether the concentration of each toxic LHG being transferred is above, at, or below any Permissible Exposure Limit listed in 29 CFR 1910.1000, Table Z–1 or Z–2.
(c) Each gas detector required by paragraph (a) or (b) of this section must serve to detect leaks, check structures for gas accumulations, and indicate workers' exposure to toxic gases in the area.

§ 127.1205 Emergency shutdown.

(a) Each piping system used to transfer LHG or its vapors to or from a vessel must have a quick-closing shutoff valve to stop the flow of liquid and vapor from the waterfront facility handling LHG if a transfer hose or loading arm fails. This valve may be the isolation valve with a bleed connection required by § 127.1101(c).

(b) The valve required by paragraph (a) of this section must be located as near as practicable to the terminal manifold or loading-arm connection and must—

(1) Close on loss of power;

(2) Close from the time of activation in 30 seconds or less;

(3) Be capable of local manual closing and remotely controlled closing; and,

(4) If the piping system is used to transfer a flammable LHG, either have fusible elements that melt at less than 105° (C 221°F) and activate the emergency shutdown, or have a sensor that performs the same function.

(c) A remote actuator for each valve must be located in a place accessible in an emergency, at least 15 meters (49.2 feet) from the terminal manifold or loading arm, and conspicuously marked with its designated function. When activated, the actuator must also automatically shut down any terminal pumps or compressors used to transfer LHG, or its vapors, to or from the vessel.

§ 127.1207 Warning alarms.

(a) Each marine transfer area for LHG must have a rotating or flashing amber light that is visible for at least 1,600 meters (1 mile) from the transfer connection in all directions.

(b) Each marine transfer are for LHG must also have a siren that is audible for at least 1,600 meters (1 mile) from the transfer connection in all directions.

(c) Each light and siren required by this section must be located so as to minimize obstructions. If any obstruction will prevent any of these alarms from meeting paragraph (a) or (b) of this section, the operator of the waterfront facility handling LHG shall propose for approval by the local COTP additional or alternative warning devices that provide an equivalent level of safety.

§ 127.1209 Respiratory protection.

Each waterfront facility handling LHG must provide equipment for respiratory protection for each employee of the facility in the marine transfer area for LHG during the transfer of one or more of the following toxic LHGs; anhydrous ammonia, chlorine, dimethylamine, ethylene oxide, methyl bromide, sulphur dioxide, or vinyl chloride. The equipment must protect the wearer from the LHG's vapor for at least 5 minutes.

Operations

§ 127.1301 Persons in charge of transfers for the facility: Qualifications and certification.

(a) No person may serve, or use the services of any person, as a person in charge of transfers for the facility regulated under this subpart, unless that person—

(1) Has at least 48 hours' transfer experience with each LHG being transferred;

(2) Knowing the hazards of each LHG being transferred;

(3) Knows the rules of this subpart; and

(4) Knows the procedures in the examined Operations Manual and the examined Emergency Manual.

(b) Before a person in charge of transfers for a waterfront facility handling LHG supervises a transfer of LHG, the operator of the facility shall certify in writing that that person has met the requirements in paragraph (a) of this section. The operator shall ensure that a copy of each current certification is available for inspection at the facility.

§ 127.1302 Training.

(a) Each operator of a waterfront facility handling LHG shall ensure that each person assigned to act as a person in charge of transfers for the facility has training in the following subjects:

(1) Properties and hazards of each LHG being transferred to or from the facility.

(2) Use of the gas detectors required by § 127.1203.

(3) Use of the equipment for respiratory protection required by § 127.1209.

(4) Basic firefighting procedures, including the use of the portable fire extinguishers required by § 127.1503.

(5) Content and use of the examined Operations Manual and examined Emergency Manual.

(6) The configuration and limitations of cargo systems of LHG vessels.

(7) Procedures for transferring LHG to and from LHG vessels.

(8) Procedures for response to a release of the LHG handled by the facility.

(9) First aid for persons—

(i) With burns;

(ii) Needing cardio-pulmonary resuscitation;

(iii) Exposed to toxic liquid or toxic vapors (if a toxic LHG is handled by the facility); and

(iv) Needing transport to a medical facility.

(10) Restrictions on access to the marine transfer area for LHG.

(b) Each person that receives training under paragraph (a) of this section shall receive refresher training in the same subjects at least once every 5 years.

(c) The operator shall maintain, for each person trained, a record of all training provided under paragraphs (a) and (b) of this section. The operator shall retain these records for the duration of the person's employment on the waterfront facility plus 12 months.

(d) Training conducted to comply with the hazard communication programs required by the Occupational Safety and Health Administration (OSHA) of the Department of Labor [29 CFR 1910.120] or the Environmental Protection Agency (EPA) [40 CFR 311.1] may be used to satisfy the requirements in paragraph (a) of this section, so far as the training addresses the requirements in paragraph (a) of this section.

§ 127.1303 Compliance with suspension order.

If the COTP issues to the owner or operator of a waterfront facility handling LHG an order to suspend a transfer, no transfer may take place at the facility until the COTP withdraws the order.

§ 127.1305 Operations Manual.

Each Operations Manual must contain—

(a) A description of each liquid-transfer system and vapor transfer system, including each mooring area, transfer connection, and (where installed) control room, and a diagram of the piping and electrical systems;

(b) The duties of each person assigned to transfers;

(c) The maximum relief-valve setting or MAWP of the transfer system;

(d) The telephone numbers of supervisors, persons in charge of transfers for the facility, persons on watch in the marine transfer area for LHG, and security personnel of the facility;

(e) A description for each security system provided for the transfer area;

(f) A description of the training programs established under § 127.1302;

(g) The procedures to follow for security violations; and

(h) For each LHG handled, the procedures for transfer that include—

(1) Requirements for each aspect of the transfer (start-up, gauging, cooldown, pumping, venting, and shutdown);

(2) The maximum transfer rate;

(3) The minimum transfer temperature;

(4) Requirements for firefighting equipment; and

(5) Communication procedures.

§ 127.1307 Emergency Manual.

(a) Each Emergency Manual must contain—

(1) For each LHG handled—

(i) A physical description of the LHG;

(ii) A description of the hazards of the LHG;

(iii) First-aid procedures for persons exposed to the LHG or its vapors;

(iv) The procedures for response to a release of the LHG; and,

(v) If the LHG is flammable, the procedures for fighting a fire involving the LHG or its vapors;

(2) A description of the emergency shutdown required by § 127.1205;

(3) The procedures for emergency shutdown;

(4) A description of the number, kind, place, and use of the fire equipment required by § 127.1501(a) and of the portable fire extinguishers required by § 127.1503;

(5) The telephone numbers of local Coast Guard units, hospitals, fire departments, police departments, and other emergency-response organizations;

(6) If the facility has personnel shelters, the place of and provisions in each shelter;

(7) If the facility has first-aid stations, the location of each station;

(8) Emergency procedures for mooring and unmooring a vessel; and,

(9) If an off-site organization is to furnish emergency response, a copy of the written agreement required by § 127.1505(a)(2).

(b) The employee-emergency plan and fire-prevention required by OSHA in 29 CFR 1910.38 may be used to comply with this section to the extent that they address the requirements specified in paragraphs (a) (1) through (9) of this section.

§ 127.1309 Operations Manual and Emergency Manual: Use.

Each operator of a waterfront facility handling LHG shall ensure that—

(a) No transfer is conducted unless the facility has an examined Operations Manual and an examined Emergency Manual;

(b) Each transfer is conducted in accordance with the examined Operations Manual; and

(c) Each emergency response is conducted in accordance with the examined Emergency Manual.

§ 127.1311 Motor vehicles.

(a) When LHG is being transferred or stored in the marine transfer area of a waterfront facility handling LHG, the operator shall ensure that no person—

(1) Stops or parks a motor vehicle in a space other than a designated parking space;

(2) Refuels a motor vehicle within the area; or

(3) Operates a vehicle or other mobile equipment that constitutes a potential source of ignition within 15 meters (49.2 feet) of any storage container, manifold, loading arm, or independent mating flange containing a flammable liquid or vapor.

(b) If motor vehicles are permitted to stop in the marine transfer area for LHG, the operator shall designate and mark parking spaces that—

(1) Do not block fire lanes;

(2) Do not impede any entrances or exits; and

(3) Are not located within 15 meters (49.2 feet) of any storage container, manifold, loading arm, or independent mating flange containing a flammable liquid or vapor.

§ 127.1313 Storage of hazardous materials.

(a) Each operator of a waterfront facility handling LHG shall ensure that no materials listed in the table of hazardous materials under 49 CFR 172.101, except for the following, are stored in the marine transfer area for LHG:

(1) The LHG being transferred.

(2) Fuel required by the vessel, or by emergency equipment in the area.

(3) Oily wastes received from vessels.

(4) Solvents, lubricants, paints and similar materials in the amount required for one day's operations and maintenance.

(b) The operator shall ensure that flammable liquids not stored in bulk are stored in accordance with Chapter 4 of NFPA 30.

§ 127.1315 Preliminary transfer inspection.

Before each transfer, the person in charge of transfer for the facility shall—

(a) Inspect piping and equipment within the marine transfer area for LHG to be used for transfer and ensure that it meets the requirements in this part;

(b) Determine the contents, pressure, temperature, and capacity of each storage tank to or from which LHG will be transferred, to ensure that it is safe for transfer;

(c) Confer with the person in charge of transfer aboard the vessel, to review and agree on—

(1) The sequence of acts required for transfer;

(2) The rate, maximum working pressure, and minimum working temperature of transfer;

(3) The duties, stations, and watches of each person assigned for transfer; and

(4) The emergency procedures in the examined Emergency Manual;

(d) Ensure that the vessel is securely moored and that the transfer connections allow it to move to the limits of its moorings without placing a strain on the piping, hose, or loading arm used for transfer;

(e) Ensure that each part of the transfer system is aligned to allow the flow of LHG to the desired place;

(f) Ensure the display of the warning signs required by § 127.1113;

(g) Ensure that the requirements of this part concerning smoking and fire protection are met;

(h) Ensure that qualified personnel are on duty in accordance with the examined Operations Manual and §§ 127.1301 and 127.1302; and

(i) Test the following to determine that they are operable:

(1) The communication system required by § 127.1111.

(2) The gas detectors required by § 127.1203.

§ 127.1317 Declaration of Inspection.

(a) Each person in charge of transfer for the facility shall ensure that no person transfers LHG to or from a vessel until a Declaration of Inspection that meets paragraph (c) of this section is executed and signed by both the person in charge aboard the vessel and the person in charge for the facility.

(b) No person in charge of transfer for the facility may sign the Declaration unless that person has fulfilled the requirements of § 127.1315 and has indicated fulfillment of each requirement by writing his or her initials in the appropriate space on the Declaration.

(c) Each Declaration must contain—

(1) The name of the vessel and that of the facility;

(2) The date and time that the transfer begins;

(3) A list of the requirements in § 127.1315 with the initials of both the person in charge aboard the vessel and the person in charge for the facility after each requirement, indicating the fulfillment of the requirement;

(4) The signatures of both the person in charge aboard the vessel and the person in charge for the facility, and the date and time of signing, indicating that they are both ready to begin transfer; and

(5) The signature of each relief person in charge and the date and time of each relief.

(d) The person in charge of transfer for the facility shall give one signed copy of the Declaration to the person in charge of transfer aboard the vessel and retain the other.

(e) Each operator of a facility shall retain a signed copy of the Declaration at the facility for 30 days after the transfer.

§ 127.1319 Transfer of LHG.

(a) The operator of a waterfront facility handling LHG shall notify the COTP of the time and place of each transfer of LHG in bulk at least 4 hours before it begins.

(b) During transfer, each operator of a waterfront facility handling LHG shall ensure that—

(1) The marine transfer area for LHG is under the supervision of a person in charge certified for transfers of LHG, who has no other assigned duties during the transfer;

(2) The person in charge supervises transfers only to or from one vessel at a time unless authorized by the COTP.

(3) No person transferring fuel or oily waste is involved in the transfer; and

(4) No vessel is moored outboard of any LHG vessel unless allowed by the COTP or the examined Operations Manual of the facility.

(c) During transfer, each person in charge of transfer for the facility shall—

(1) Maintain communication with the person in charge of transfer aboard the LHG vessel;

(2) Ensure that an inspection of the transfer piping and equipment for leaks, frost, defects, and other threats to safety takes place at least once every transfer;

(3) Ensure that—

(i) Transfer of LHG is discontinued as soon as a release or fire is detected in the area or aboard the vessel; and

(ii) Transfer of flammable LHG is discontinued when electrical storms or uncontrolled fires approach near the area; and

(4) Ensure that the outdoor lighting required by § 127.1109 is turned on between sunset and sunrise.

(d) Upon completion of transfer of LHG, each operator of a waterfront facility handling LHG shall ensure that hoses and loading arms used for transfer are drained of LHG residue and depressurized before disconnecting from the vessel.

Note to § 127.1319: Corresponding standards for vessels appear at 46 CFR part 154.

§ 127.1321 Release of LHG.

(a) Each operator of a waterfront facility handling LHG shall ensure that—

(1) No person intentionally releases LHG into the environment; and

(2) If a release of LHG or its vapor threatens vessels or persons outside the marine transfer area for LHG, they are notified by the warning devices.

(b) If LHG or its vapor is released, the person in charge of transfer for the facility shall—

(1) Immediately notify the person in charge of transfer aboard the vessel that transfer must be shut down;

(2) Shut down transfer in coordination with the person aboard the vessel;

(3) Notify the COTP of the release; and

(4) Not resume transfer until authorized by the COTP.

§ 127.1325 Access to marine transfer area for LHG.

Each operator of a waterfront facility handling LHG shall ensure that—

(a) Access to the marine transfer area for LHG from shoreside and waterside is limited to—

(1) Personnel who work in the area, transfer personnel, vessel personnel, and delivery and service personnel in the course of their business;

(2) Federal, State, and local officials; and

(3) Other persons authorized by the operator;

(b) Each person allowed into the area is positively identified as someone authorized to enter and that each person other than an employee of the facility displays an identifying badge;

(c) Guards are stationed, and fences or other devices are installed, to prevent, detect, and respond to unauthorized access, fires, and releases of LHG in the area, except that alternative measures approved by the COTP (such as electronic monitoring or random patrols) will be sufficient where the stationing of guards is impracticable; and

(d) Coast Guard personnel are allowed access to the facility, at any time, to make any examination or to board any vessel moored at the facility.

Maintenance

§ 127.1401 General.

Each operator of a waterfront facility handling LHG shall ensure that all cargo handling equipment is operable, and that no equipment that may cause the release or ignition of LHG is used in the marine transfer area for LHG.

§ 127.1403 Inspections.

(a) Each operator of a waterfront facility handling LHG shall conduct a visual inspection for defects of each pressure relief device not capable of being tested.

(b) The operator shall conduct the inspection required by paragraph (a) of this section at least once each calendar year, with intervals between inspections not exceeding 15 months.

§ 127.1405 Repairs.

Each operator of a waterfront facility handling LHG shall ensure that—

(a) Equipment is repaired so that—

(1) The equipment continues to meet the applicable requirements in this subpart; and

(2) Safety is not compromised; and

(b) Welding and cutting meet NFPA 51B.

§ 127.1407 Tests.

(a) Each operator of a waterfront facility handling LHG shall conduct a static liquid-pressure test of the piping, hoses, and loading arms of the LHG-transfer system located in the marine transfer area for LHG, and shall verify the set pressure of the safety and relief valves—

(1) After the system or the valves are altered;

(2) After major repairs to the system or the valves;

(3) After any increase in the MAWP of the system; and

(4) At least once each calendar year, with intervals between tests not exceeding 15 months.

(b) The pressure for the test under paragraph (a) of this section must be at least 1.1 times the MAWP and last for at least 30 minutes.

(c) The operator shall conduct a test of each pressure gauge, to ensure that the displayed pressure is within 10 percent of the actual pressure, at least once each calendar year, with intervals between tests not exceeding 15 months.

(d) The operator shall conduct a test of each item of remote operating or indicating equipment, such as a remotely operated valve, at least once each calendar year, with intervals between tests not exceeding 15 months.

(e) The operator shall conduct a test of the emergency shutdown required by § 127.1205 at least once every two months, to ensure that it will perform as intended. If transfers of LHG occur less often than every two months, the operator may conduct this test before each transfer instead of every two months.

(f) The operator shall conduct a test of the warning alarm required by § 127.1207 at least once every six months, to ensure that it will perform as intended. If transfers of LHG occur less often than every six months, the operator may conduct this test before each transfer instead of every six months.

§ 127.1409 Records.

(a) Each operator of a waterfront facility handling LHG shall keep on file:

(1) A description of the components inspected or tested under § 127.1403 or 127.1407.

(2) The date and results of each inspection or test under § 127.1403 or 127.1407.

(3) A description of any repair made after the inspection or test.

(4) The date and a description of each alteration or major repair to the LHG transfer system or its valves.

(b) The operator shall keep this information on file for at least 24 months after the inspection, test, alteration, or major repair.

Firefighting Equipment

§ 127.1501 General.

(a) The number, kind, and place of equipment for fire detection, protection, control, and extinguishment must be determined by an evaluation based upon sound principles of fire-protection engineering, analysis of local conditions, hazards within the waterfront facility handling LHG, and exposure to other property. A description of the number, kind, place, and use of fire equipment determined by this evaluation must appear in the Emergency Manual for each facility. The evaluation for each new facility and for all new construction on each existing facility must be submitted to the COTP for review when the emergency manual is submitted under § 127.103.

(b) All fire equipment for each facility must be adequately maintained, and periodically inspected and tested, so it will perform as intended.

(c) The following must be red or some other conspicuous color and be in places that are readily accessible:

(1) Hydrants and standpipes.

(2) Hose stations.

(3) Portable fire extinguishers.

(4) Fire monitors.

(d) Fire equipment must bear the approval, if applicable, of Underwriters Laboratories, Inc., Factory Mutual Research Corporation, or other independent laboratory recognized by NFPA.

§ 127.1503 Portable fire extinguishers.

Each operator of a waterfront facility handling LHG must provide portable fire extinguishers of appropriate, number, size, and kind in the marine transfer area for LHG in accordance with NFPA 10.

§ 127.1505 Emergency response and rescue.

(a) Each waterfront facility handling LHG must arrange for emergency response and rescue pending the arrival of resources for firefighting or pollution control. Response and rescue may be performed by facility personnel or by an off-site organization.

(1) If response and rescue are performed by facility personnel, appropriate training and equipment for personnel protection must be furnished to those personnel. Training and equipment that meets 29 CFR 1910.120, hazardous-waste operations and emergency response, will be appropriate.

(2) If response and rescue are performed by an off-site organization, the organization must enter into a written agreement with the facility indicating the services it will perform and the time within which it will perform them to injured or trapped personnel.

(b) [Reserved]

§ 127.1507 Water systems for fire protection.

(a) Each waterfront facility handling LHG must have a supply of water and a means for distributing and applying the water to protect personnel; to cool storage tanks, equipment, piping, and vessels; and to control unignited leaks and spills in the marine transfer area for LHG except when the evaluation required by § 127.1501(a) indicates otherwise. The evaluation must address fire protection for structures, cargo, and vessels. Each water system must include on the pier or wharf at least one 2½-inch supply line, one 2½-inch fire hydrant, and enough 2½-inch hose to connect the hydrant to the vessel.

(b) Each water system must fully and simultaneously supply, for at least 2 hours, all fixed fire-protection systems, including monitor nozzles, at their designed flow and pressure for the worst single incident foreseeable, plus 63 L/s (1000 gpm) for streams from hand-held hoses.

§ 127.1509 Equipment for controlling and extinguishing fires.

(a) Within each marine transfer area for LHG of each waterfront facility handling LHG that transfers a flammable LHG, portable or wheeled fire extinguishers suitable for gas fires, preferably dry chemical extinguishers, must be available at strategic sites, as determined by the evaluation required by § 127.1501(a).

(b) Fixed systems for extinguishing or controlling fires may be appropriate for protection against particular hazards. The evaluation required by § 127.1501(a) may specify the use of one or more of the following fixed systems:

(1) Low-, medium-, or high-expansion foam.

(2) Dry chemicals.

(3) Water applied as deluge, spray, or sprinkle.

(4) Carbon dioxide.

(5) Other NFPA approved fire extinguishing media.

§ 127.1511 International shore connection.

Each marine transfer area for LHG that receives foreign flag vessels must have an international shore connection meeting the requirements of ASTM F–1121.

Fire Protection

§ 127.1601 Smoking.

Each operator of a waterfront facility handling LHG shall ensure that no person smokes in the marine transfer area for LHG unless—

(a) Neither flammable LHG nor its vapors are present in the area; and

(b) The person is in a place designated and marked in accordance with local law.

§ 127.1603 Hotwork.

Each operator of a waterfront facility handling LHG shall ensure that no person conducts welding, torch cutting, or other hotwork on the facility, or on a vessel moored to the facility, unless—

(a) The COTP has issued a permit for that hotwork; and

(b) The conditions of the permit are met.

§ 127.1605 Other sources of ignition.

Each operator of a waterfront facility handling LHG shall ensure that in the marine transfer are for LHG—

(a) There are no open fires or open flame lamps;

(b) Heating equipment will not ignite combustible material;

(c) Each chimney and appliance has a spark arrestor if it uses solid fuel or is located where sparks may ignite combustible material; and

(d) All rubbish, debris, and waste go into appropriate receptacles.

§ 127.605 Table I [Added]

19. A new Table 1 is added after new § 127.1605 to read as follows:

TABLE 1 TO PART 127.—LIST OF PRODUCTS AND HAZARDS

Product	Hazard
Acetaldehyde	F+T
Ammonia, anhydrous	T
Butadiene	F
Butanes	F
Butane and propane (mixtures)	F
Butylenes	F
Chlorine	T
Dimethylamine	F+T
Ethane	F
Ethyl chloride	F+T
Ethylene	F
Ethylene oxide	F+T
Methyl-acetylene and propadiene (mixtures).	F
Methyl bromide	F+T
Methyl chloride	F+T
Propane	F
Propylene	F
Sulphur dioxide	T
Vinyl chloride	F+T

Note: "F" indicates a flammable product. "T" indicates a toxic product. "F&T" indicates a product both flammable and toxic.

Dated: June 23, 1995.

J.C. Card,

Rear Admiral, U.S. Coast Guard, Chief, Office of Marine Safety, Security and Environmental Protection.

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